In the Specification

Applicants present replacement paragraphs below indicating the changes with insertions indicated by underlining. Please replace the paragraph beginning at column 22, line 11 with the amended paragraph as follows:

pH can affect chemical precipitation by altering the solubility of the precipitate; the solubility of hydroxyapatite decreases as pH increases. As a result, nucleation would be favored decreasing crystallite size. Furthermore, different pH's affect agglomeration by inducing a surface charge on the particles in solution. Similar surface charges in the solution of the particles repel each other reducing agglomeration in the solution. However, the same polar solvents that prevented agglomeration during precipitation introduce surface hydroxyl groups onto ceramic particles during the drying process. As the ceramic gel dries, the surface hydroxyl groups promote agglomeration of particles. It is therefore desirable to use a nonpolar solvent, to wash the gel in order to remove the surface hydroxyl groups. Finally, the different pHs during the chemical precipitation are expected to affect crystal morphology, and the morphology becomes increasingly rod-like<u>, or spherical to needle-like,</u> with increasing pH<u>, for example to aspect ratios ranging from about 2.3:1 to 5.9:1</u>. Tanahashi et al. reported that the solution pH greatly influenced the growth rate and morphology of hydroxyapatite and that fibrous hydroxyapatite could be prepared at high pH. Hydroxyapatite synthesized through hydrothermal treatment at a pH of 11 to 12 also resulted in nanometer-sized rod-like crystals. However, the addition of glycerin during the synthesis confounded the relationship between high pH and the synthesis of rod-like hydroxyapatite, with the effect of additives on the synthesis of rod-like hydroxyapatite. The synthesis conditions of the calcined hydroxyapatite powders used to determine the effect of NH_4OH are presented in Table 9.